Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for centering a liquid drop (2) at a given location of a surface (4), comprising the step of forming at this location a flared hollow (6) such that, at any point (CP1) of the contact limit between the drop and the hollow, said hollow has a curvature smaller than or opposite to that of a circle (TC) tangent to the hollow surface at said point and at a symmetrical point (CP2) of this surface.

2. (Previously Presented) The method of claim 1, wherein the flared hollow (6) has the shape of a truncated cone with an axis perpendicular to said surface.

3. (Previously Presented) The method of claim 1, wherein the flared hollow (6) has the shape of the upper central portion of a torus having an axis perpendicular to the surface.

4. (Previously Presented) A method for centering a liquid drop (14) on the external surface of a convex surface (16), comprising the step of giving this surface at any point (CP1) of the contact limit with the drop a shape such that this surface has a curvature greater than that of a circle (TC) tangent to this surface at this point and at a symmetrical point (CP2) of this surface.

5. (Previously Presented) The method of claim 4, comprising the step of forming the convex surface (6) by revolution against said axis of an arc of a circle having a radius smaller than that of said tangent circle.

6. (Previously Presented) A variable-focus lens, comprising:

a wall made of an insulating material (4),

a drop of an insulating liquid (2) arranged on an area of a first surface of the wall,

a conductive liquid (8) covering the first surface and the drop, the insulating and conductive liquids being non-miscible, having different optical indexes and substantially the

same density, and

means (12) for applying an electric voltage (V) between the conductive liquid and an electrode (10) arranged on a second surface of said wall,

wherein the drop is centered in a flared hollow (6) that has been formed in the wall so that, at any point (CP 1) of the contact limit between the drop and the hollow, said hollow has a curvature smaller than or opposite to that of a circle tangent to the hollow surface at said point and at a symmetrical point of this surface.

7. (Previously Presented) The variable-focus lens of claim 6, wherein:

the electrode (10) is a sheet metal,

the flared hollow (6) is a truncated cone formed by embossing said sheet metal, centered on an axis (O) perpendicular to the first surface, and the bottom of which is pierced with a centered hole (11), and

the insulating material wall (4) is a transparent plastic film flattened against the electrode and the walls of the hollow, and which covers said hole.

8. (Previously Presented) The variable-focus lens of claim 6, wherein:

the electrode (10) is a sheet metal,

the flared hollow (6) is a truncated cone formed by machining said sheet metal, centered on an axis (O) perpendicular to the first surface, and the bottom of which is pierced with a centered hole (11), and

the insulating material wall (4) is a transparent plastic film flattened against the electrode and the walls of the hollow, and which covers said hole.

9. (Previously Presented) A variable-focus liquid lens comprising:

a transparent dielectric enclosure layer (4) having a first and second surfaces;

an axis (O) associated with the dielectric enclosure layer, oriented orthogonal to the first surface;

a hollow (6) defined on the first surface of the dielectric enclosure layer, the hollow being centered on the axis (O);

a first electrode (10) provided on the second surface of the dielectric enclosure layer

and having a hole (11) centered on the axis (O);

a drop of an insulating liquid (2) placed in the hollow and centered on the axis (O);

a conductive liquid (8) covering the drop of the insulating liquid and the first surface of the dielectric enclosure layer, the two liquids being non-miscible, having different optical indices and substantially the same density, wherein a dioptre formed between the insulating liquid and the conductive liquid forming a surface of the liquid lens, the optical axis of which is the axis (O);

a second electrode (12) in contact with the conductive liquid for applying an electric voltage (V) between the conductive liquid and the electrode (10); and

the hollow having a curvature, wherein at any point (CP1) of contact limit between the drop and the hollow, the hollow's curvature is smaller than or opposite to that of a circle tangent to the hollow's surface at the point of contact limit.

10. (Previously Presented) The variable-focus liquid lens of claim 9, wherein the first electrode (10) is a sheet metal, the hollow (6) is a truncated cone formed by embossing the sheet metal, and the dielectric enclosure layer (4) is a plastic film flattened against the first electrode.

11. (Previously Presented) The variable-focus liquid lens of claim 9, wherein the first electrode (10) is a sheet metal, the hollow (6) is a truncated cone formed by machining the sheet metal, and the dielectric enclosure layer (4) is a plastic film flattened against the first electrode.

12. (Previously Presented) The variable-focus liquid lens of claim 9, wherein the second electrode (12) is immersed in the conductive liquid.

13. (Previously Presented) The variable-focus liquid lens of claim 9, wherein the second electrode (12) is a conductive deposition performed on the first surface of the dielectric enclosure.

14. (Previously Presented) A method for centering a liquid drop at a given location of a

surface comprising:

providing the drop on the surface, the surface having at least one sidewall, such that, at any point of the contact limit between the drop and the surface, said surface has a curvature smaller than or opposite to that of a circle tangent to the surface at said point and at a symmetrical point of the surface.

15. (Previously Presented) The method of claim 14, wherein a wetability of the surface is constant.

16. (Previously Presented) The method of claim 14, wherein the surface has a rotational symmetry about an axis perpendicular to the surface.

17. (Previously Presented) The method of claim 14, wherein the surface comprising at least one sidewall defines a cavity.

18. (Previously Presented) The method of claim 14, wherein the surface comprising at least one sidewall comprises a flared hollow, the drop is formed at the location of the flared hollow, and the flared hollow has the shape of a truncated cone with an axis perpendicular to said surface.

19. (Previously Presented) The method of claim 14, wherein the surface comprising at least one sidewall comprises a flared hollow, the drop is formed at the location of the flared hollow, and the flared hollow has the shape of the upper central portion of a torus having an axis perpendicular to the surface.

20. (Previously Presented) A variable-focus lens comprising:

a wall made of an insulating material and defining a cavity having at least one sidewall;

a drop of an insulating liquid arranged on a first surface of the wall;

a conductive liquid covering the drop, the insulating and conductive liquids being non-miscible, having different optical indexes and substantially the same density; and

a voltage source configured to apply an electric voltage between the conductive liquid and an electrode arranged on a second surface of said wall,

wherein the wall has a shape such that, at any point of the contact limit between the drop and the first surface, said first surface has a curvature smaller than or opposite to that of a circle tangent to the first surface at said point and at a symmetrical point of the first surface, for centering the drop.

21. (Previously Presented) The variable-focus lens of claim 20, wherein a wetability of the first surface is constant.

22. (Previously Presented) The variable-focus lens of claim 20, wherein the first surface has a rotational symmetry about the axis.

23. (Previously Presented) The variable-focus lens of claim 20, wherein:

the electrode comprises a sheet metal,

wherein the cavity comprises a flared hollow, the drop is centered in the flared hollow, the flared hollow is a truncated cone formed by embossing said sheet metal, centered on an axis perpendicular to the first surface, and the bottom of which is pierced with a centered hole, and

the insulating material wall is a transparent plastic film flattened against the electrode and walls of the hollow, and which covers said hole.

24. (Previously Presented) The variable-focus lens of claim 20, wherein:

the electrode comprises a sheet metal,

wherein the cavity comprises a flared hollow, the drop is centered in the flared hollow, the flared hollow is an upper central portion of a torus formed by machining said sheet metal, centered on an axis perpendicular to the first surface, and the bottom of which is pierced with a centered hole, and

the insulating material wall is a transparent plastic film flattened against the electrode and walls of the hollow, and which covers said hole.

25. (Previously Presented) A variable-focus liquid lens comprising:

a transparent dielectric enclosure layer having first and second surfaces, the first surface defining at least one sidewall;

an axis associated with the dielectric enclosure layer, oriented orthogonal to the first surface at a point;

a first electrode provided on the second surface of the dielectric enclosure layer and having a hole encompassing the axis;

a drop of an insulating liquid disposed on the first surface and centered on the axis;

a conductive liquid covering the drop of the insulating liquid, the two liquids being non-miscible, having different optical indices and substantially the same density, wherein a dioptre formed between the insulating liquid and the conductive liquid forming a surface of the liquid lens, the optical axis of which corresponds with the axis;

a second electrode in contact with the conductive liquid for applying an electric voltage between the conductive liquid and the electrode; and

the first surface having a curvature, wherein at any point of contact limit between the drop and the first surface, the first surface's curvature is smaller than or opposite to that of a circle tangent to the first surface at the point of contact limit.

26. (Previously Presented) The variable-focus liquid lens of claim 25, wherein a wetability of the first surface is constant.

27. (Previously Presented) The variable-focus liquid lens of claim 25, wherein the first surface has a rotational symmetry about the axis.

28. (Previously Presented) The variable-focus liquid lens of claim 25,

wherein the first surface defining at least one sidewall comprises a cavity, the cavity being centered on the axis, wherein the drop of an insulating liquid is disposed in the cavity, and

wherein the first electrode is a sheet metal, the cavity is formed by embossing the sheet metal, and the dielectric enclosure layer is a plastic film flattened against the first electrode.

29. (Previously Presented) The variable-focus liquid lens of claim 25, wherein the second electrode is immersed in the conductive liquid.

30. (Previously Presented) The variable-focus liquid lens of claim 25, wherein the second electrode is a conductive deposition performed on the first surface of the dielectric enclosure.

31. (Previously Presented) A method of varying the focal length of a lens, comprising:

providing a lens structure comprising an insulating drop on a surface, the surface having at least one sidewall, the shape of the surface being such that, at any point of the contact limit between the drop and the surface, said surface has a curvature smaller than or opposite to that of a circle tangent to the surface at said point and at a symmetrical point of the surface, for centering the drop, a conducting liquid covering the insulating drop, and an electrode; and

changing a voltage applied between the electrode and the conducting liquid to thereby change the area of the surface which the insulating liquid contacts.

32. (Previously Presented) The method of claim 31, wherein a wetability of the surface is constant.

33. (Previously Presented) The method of claim 31, wherein the surface has a rotational symmetry about an axis perpendicular to the surface.